



**Association of  
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Leadership Advocacy Information

SUSTAINABILITY FROM THE GROUND UP  
**GROUNDWATER MANAGEMENT IN CALIFORNIA**  
– A FRAMEWORK –

# ACWA Groundwater Activities 2011-2013



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# ACWA/DWR Groundwater Management Survey

- Partnership with Department of Water Resources
- Groundwater management activities
- Inventory of groundwater banking projects
- Launched in October 2011
- Survey available at:

[www.acwa.com/groundwater\\_survey](http://www.acwa.com/groundwater_survey)





## Survey Components

- Broken up into three sections online
  - 1) DWR GWMP Database Information
  - 2) Details on elements of groundwater management activities by each agency
  - 3) Inventory of groundwater banking projects throughout the state







## DWR GWMP Database Information

- Information on groundwater management plans gathered by DWR from variety of sources
- Verify the information listed in downloadable spreadsheet
- If GWMP is not listed, submit details in survey
- Includes areas outside Bulletin 118





# DWR GWMP Database Information



## Groundwater Survey Part 1: GWMP Spreadsheet Questions

A staff member from DWR and/or ACWA may contact you to discuss a follow-up question if there are answers that are unclear or more information is needed. Please provide the following information. If you are a consultant please list the agency you are representing under employer.

\* Name:  First  Last

\* Email:

\* Phone Number:

\* Employer:

☒ Yes, I would like to receive e-mail from ACWA

☒ Remember me. [What's this?](#)

Please choose the appropriate ACWA Region you are in:

Please select response

Basin or Groundwater Management Plan represented:

Please reference [this spreadsheet](#) when answering the follow questions.

Is your groundwater management plan listed in the spreadsheet?

Please select response

If your groundwater management plan is listed in the spreadsheet is the information correct (including latest GWMP update?)

Please select response



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# DWR GWMP Database Information

If the information is not listed correctly, please provide the correct information and/or a point of contact where we can obtain the correct information.

Can you obtain (and provide) a digital copy of GWMPs, if it is not listed in this table? If yes, we will contact you to obtain a copy.

**Please select response**

If no, would you be interested in obtaining technical assistance to digitize the GWMP?

**Please select response**

Can you obtain (and provide) a digital shape file of the area boundary covered under the GWMP?

**Please select response**

If no, would you be interested in obtaining technical assistance to digitize the GWMP boundary?

**Please select response**

If your basin is not listed in the spreadsheet as being covered by a groundwater management plan and one exists please provide the information and/or a point of contact for follow up information.

Do you have a Groundwater Management Plan (or functional equivalent) that is located outside the alluvial groundwater basins delineated in DWR's Bulletin 118 (e.g. hard rock?) <http://www.water.ca.gov/groundwater/bulletin118/update2003.cfm>

**Please select response**

If yes, please provide as much information as possible, based on the headings from the spreadsheet.

Please list any other GWMP's in the Hydrologic Region, Groundwater Basin or County you may be aware of that are not on the list.

Notes / Other Comments (If there are answers or additional information you would like to provide regarding your groundwater management activities please indicate them here.)

Please let us know what DWR Hydrologic Region you are in:

**Continue Survey**

**Reset Answers**

**Skip This Survey Section**



# Elements of Groundwater Management Plans

- Specific Basin Management Objectives
- Bulletin 118 suggested components
- Key factors for success and existing limitations
- Multiple areas for additional comment







# Elements of Groundwater Management Plans



## Groundwater Survey Part 2: Groundwater Management Plans

For consistency purposes, please fill out the contact information below.

\* Name:  First  Last  
\* Employer:

☒ Remember me. [What's this?](#)

Which of the SB 1938 required components (from Appendix C, Bulletin 118-2003) are addressed in your Groundwater Management Plan (even if it is not a SB 1938 plan?)

BMO = Basin Management Objectives

- ☐ BMO: Groundwater Levels
- ☐ BMO: Groundwater Quality
- ☐ BMO: Inelastic Subsidence
- ☐ BMO: Changes in SW Flow and Quality that affect GWLs or quality, or are caused by pumping in the basin
- ☐ Monitoring Protocols for the BMOs
- ☐ A Monitoring Plan for the BMOs
- ☐ A Local Agency Coordination Plan
- ☐ A Map detailing the area of the GWMP and the local agencies

If there are components that are not included in the question above, please provide further explanation below.





# Groundwater banking projects inventory

- Specific details on banking activities
- Request for information on additional projects
- Challenges preventing implementation
- Section also includes questions on CASGEM





# Groundwater banking projects inventory



## Groundwater Survey Part 3: Groundwater Banking

For consistency purposes, please fill out the contact information below.

\* Name:  First  Last

\* Employer:

☒ Remember me, [What's this?](#)

Is your agency/district engaged in a groundwater banking project (generally defined as a water management tool where dewatered aquifer space is used to store water during wet years and then pumped and used during dry years)?

Please select response

If you answered yes, please indicate the following details about your project by answering questions a-f below:

a. location of your project (groundwater basin level information)

b. the year it was developed

c. capital costs to develop the project

d. annual operation costs

e. administrator/operator of the project (if it is private please indicate "private owner")

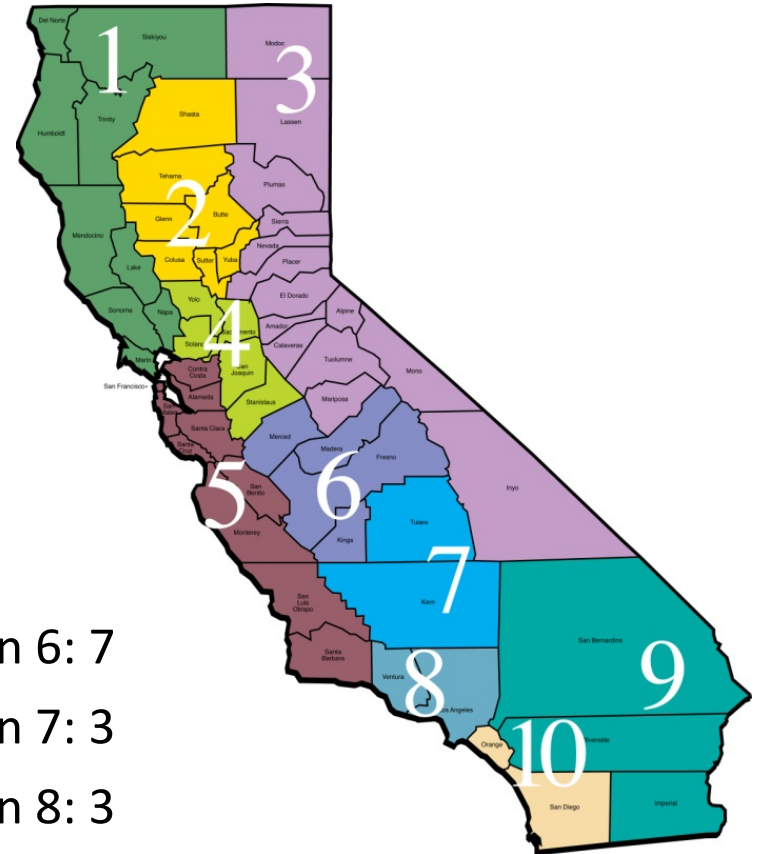
f. the capacity of the project in acre feet (please indicate if it is an estimate)



# Current Results

## Part 1 (GWMP Database):

- Number of responses:
  - Part 1: 60
  - Part 2: 53
  - Part 3: 26
- ACWA Region representation:
  - Region 1: 1
  - Region 2: 7
  - Region 3: 2
  - Region 4: 9
  - Region 5: 13
  - Region 6: 7
  - Region 7: 3
  - Region 8: 3
  - Region 9: 5
  - Region 10: 5







# Current Results

## Part 2 (Elements of GWMP):

- Top SB 1938 Required Components included in plan:
  - BMO: Groundwater Levels, 73.6%
  - BMO: Groundwater Quality, 67.9%
  - A Map detailing the area of the GWMP and the local agencies, 62.3%
- Coordination with IRWM efforts:
  - 47.2% responses indicated they have included IRWM Coordination in their GWMP (defined as a description of GWMP coordination with nearby IRWM Groups, water managers and land use planners)





# Current Results

## Part 2 (Elements of GWMP):

- Does your plan have a description and map of recharge areas that contribute to the replenishment of the basin (as required by AB 359 (Ch. 572, Stat. 2011))?
  - 41.5% said yes, 22.6% said they plan to add it to their GWMP
- Top challenges:
  - Limited funding for groundwater management projects, planning and for assistance to ensure stakeholder participation
- Is your groundwater supply sustainable/reliable in the long-term?
  - 52.8% said yes



# Current Results

## Part 3 (Groundwater Banking):

- Nine agencies indicated they have banking projects
- Capacity of the projects range from 2,000 af to up to 1 maf
- Challenges preventing implementation of additional projects
  - funding for capital costs
  - adequate regional and local surface storage and conveyance systems
  - planning and/or technical assistance
  - additional surface water supplies







## Survey Next Steps

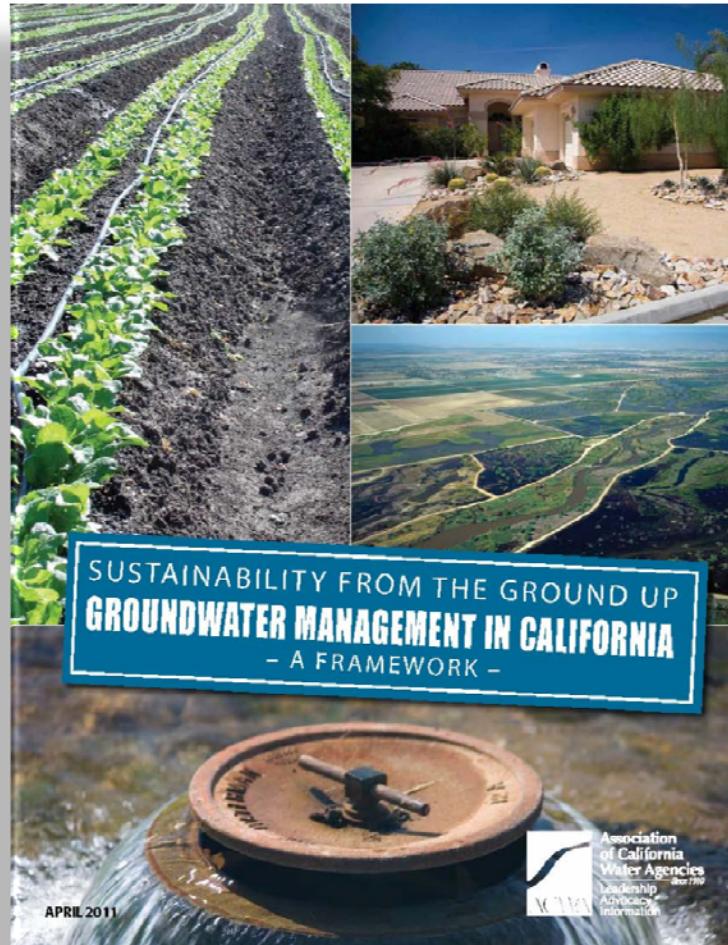
- Current results—what areas are we missing?
  - DWR and ACWA compiling data
- Need additional responses—areas outside Bulletin 118
- Map of local and regional groundwater management in California
- Partnership with California Water Foundation





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## SUSTAINABILITY FROM THE GROUND UP **GROUNDWATER MANAGEMENT IN CALIFORNIA** – A FRAMEWORK –

# Framework Background

- ACWA Policy Principles in 2009 addressed the sustainability of California's groundwater resources
- Effort to develop Framework began in early 2009
- Developed by experienced groundwater managers throughout the state
- Overview of current groundwater conditions, challenges, case studies in effective local management, and 22 recommendations for consideration and action







# Purpose of Framework

- Highlight the many successful locally-driven cases of innovative groundwater management
- Provide a policy foundation and recommendations for expanding successful efforts

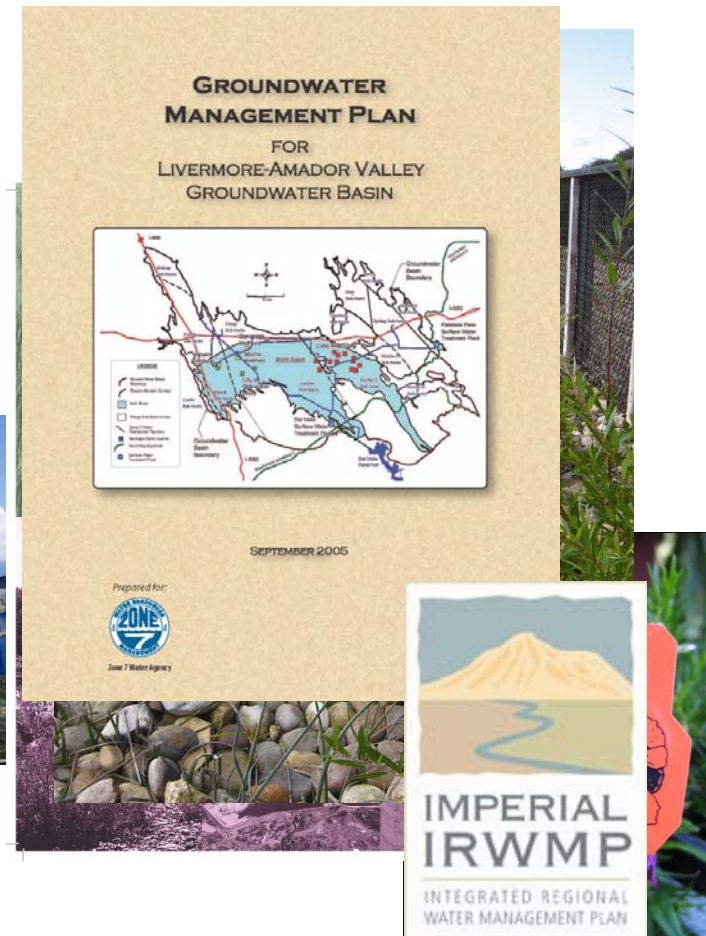




## SUSTAINABILITY FROM THE GROUND UP GROUNDWATER MANAGEMENT IN CALIFORNIA – A FRAMEWORK –

# Foundational Themes of Framework

- Sustainability must be a key policy goal for local groundwater management
- The management tools we need already exist today
- The local level is the appropriate place to provide sustainable management
- Sustainable groundwater management can only happen as part of a comprehensive approach that includes Delta conveyance improvements, additional surface and groundwater storage, and investments in local resources development







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# Just a Few Examples...



Sacramento Groundwater Authority



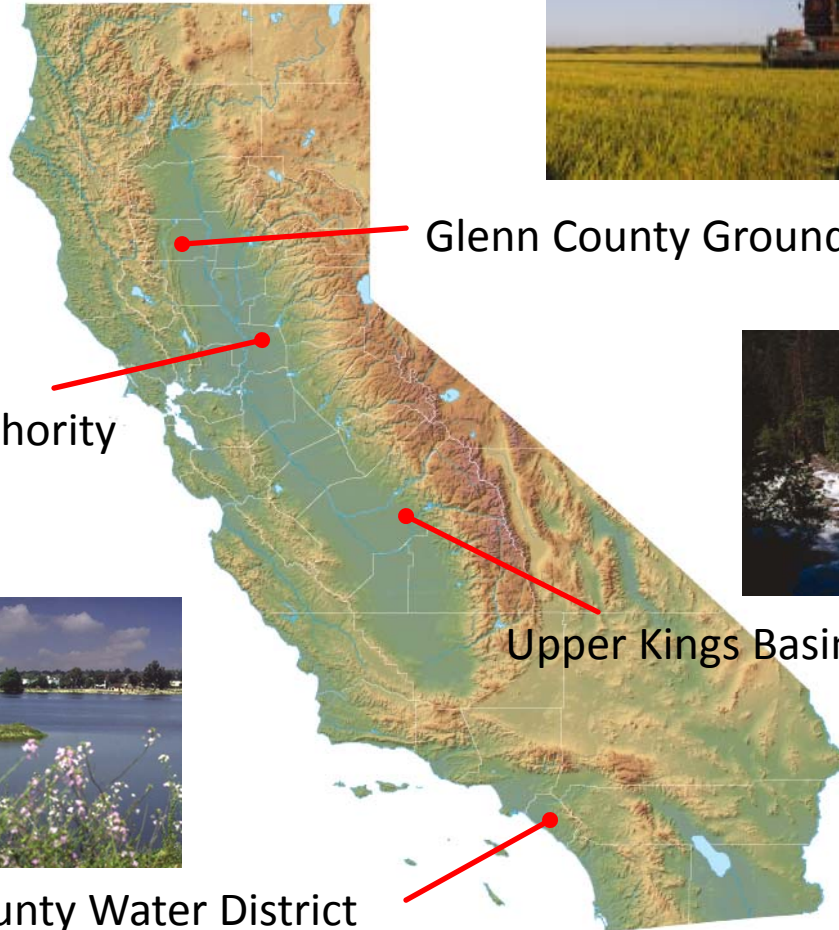
Glenn County Groundwater Mgmt. Plan



Upper Kings Basin IRWM Authority



Orange County Water District







# Summary of Recommendations

1. Local water agencies throughout California should implement sustainable groundwater management plans
2. The state should facilitate the development of these plans
3. The state should remove impediments to sustainable groundwater management
4. We must implement comprehensive solutions to achieve the coequal goals





## 2012-2013 Action Plan

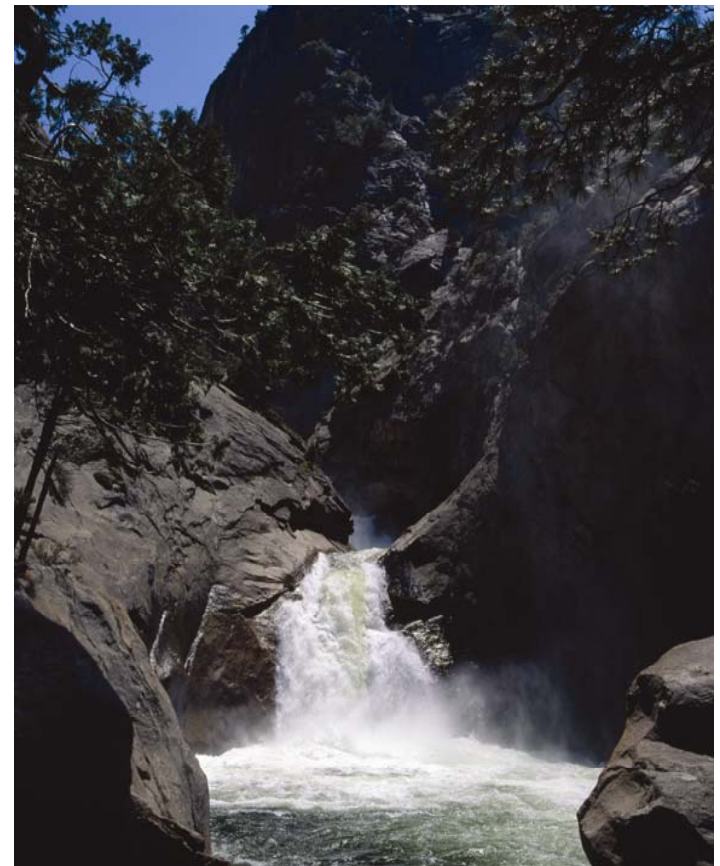
- Implementation Subcommittee formed to create plan
- Focus on specific recommendations for action in 2012-2013
- Matrix included with status of all 22 recommendations
- Eight areas highlighted as priorities
- Additional ongoing activities





# 2012-2013 Action Plan Priorities

- Groundwater management survey
- “Sustainability” and “transparency”
- Small and disadvantaged communities
- SB 918 implementation (gw recharge)
- Data availability
- California Water Foundation partnership
- Groundwater recharge as beneficial use
- Elements of a “sustainable” GWMP







# 2012-2013 Action Plan Priorities

- Small and disadvantaged communities
  - Focus on water quality issues
  - Availability of data in affected areas
  - SBX2 1 Nitrate Pilot Projects
  - Increased funding for infrastructure improvements
  - Collaboration with local stakeholders





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# 2012-2013 Action Plan Priorities

- California Water Foundation partnership
  - Follow-up to groundwater management survey
  - Technical workshops
  - Interactive website





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## Integration with DWR/IRWM Efforts

- ACWA's mission: advocacy and information
- Advocate for state IRWM funding
- Collaboration with DWR on CASGEM
  - 2010 educational workshops
- DWR Water Plan Groundwater Caucus
  - Survey partnership
- Outreach at DWR Regional events
- Support for local and regional solutions







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Questions??

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